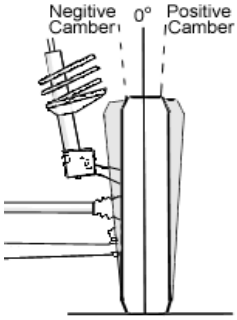
ITEMS TO BE INSPECTED

Note: Inspectors are not required to disassemble and reassemble parts to do an inspection. For example, if a vehicle has wheel covers that cover the lug nuts, the lug nuts need not be inspected. If an inspector elects to remove the covers for the inspection, there can be no additional charge for the additional work involved.

ALIGNMENT (Form Line 2)

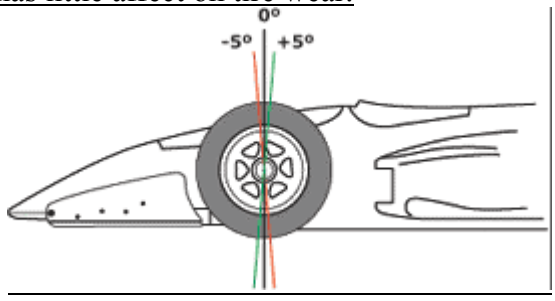
Unevenly worn tires may indicate maladjusted wheel alignment. There are 5 factors associated with wheel alignment: caster, camber, toe-in, steering axis inclination and toe-out in turns. The underlined cannot be adjusted.

Camber: If the camber is out of adjustment, it will cause more tire wear on one side of the tire than on the other.



If the camber is different from side to side it can cause a pulling problem. The vehicle will pull to the side with the more positive camber.

Caster: If the caster is out of adjustment, it can cause problems in straight-line tracking. If the caster is different from side to side, the vehicle will pull to the side with the less positive caster. If the caster is equal but too negative, the steering will be light and the vehicle will wander and be difficult to keep in a straight line. If the caster is equal but too positive, the steering will be heavy and the steering wheel may kick when you hit a bump. Caster has little affect on tire wear.



Toe-In: An incorrect toe-in will cause rapid tire wear to both tires equally. The wear will be straight rather than slanted as in camber wear.

Fail alignment **if:**

►Tire wear indicates that there is an alignment problem.

BODY ITEMS (Form Line 29)

Battery & Wiring

Fail vehicle if:

►Insulation is worn so that bare wire has potential for causing a short.

►Wire connection is loose.

►Battery is not securely mounted to the vehicle.

Bumpers (Form Line 8)

The State sets a 22 inch maximum height for cars. Although there is no minimum height for cars, the minimum height for a license plate is 12 inches (249-7(b), HRS). The County ordinances require both a front and a back bumper. "Bumper" for purposes of the Hawaii Revised Statutes means a horizontal load bearing protective system installed on a motor vehicle which is constructed of sturdy materials that will not shatter or split upon moderate impact and provides adequate protection against damages to the front and rear external lighting and reflective devices, hood, trunk, doors, painted surfaces, cooling system, exhaust system, and other components during a low speed impact.

Fail bumpers if:

►They do not conform to the State (291-35.1[1] and 249-7(b), HRS) or County requirements.

►Bumpers are not securely installed or mounted.

►Bumpers are damaged to the extent that sharp edges or protrusions are hazardous to persons accidentally coming in contact with the bumper while the vehicle is parked.

Doors & Hood Latches (Lines 23 & 24)

If a vehicle was built with permanent doors (verses doors that are easily removable, like on Jeeps) it must have doors in order to pass inspection. All doors must have both a primary and secondary latch. Hoods that open toward the front of the vehicle must have a secondary latch too. Open and close the hood and at least the two front doors to be sure they close completely and the secondary latch is functional. Since the front doors are used most, they are the most likely to malfunction. However, if damage suggests that any other door will malfunction, check it too.

Fail doors if:

►They do not latch in the fully closed position.

►The secondary latch does not work properly.

►A required door or hood is missing.

►A door is not properly installed or lacks a full range of motion.

►Rope, wire or similar material is used to hold doors, hood or trunk lid in place.

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[1] Passenger vehicles 22 inches 22 inches; GVWR of 4,500 lbs. and under 29 inches 29 inches; 4,501 lbs. to 7,500 lbs. 33 inches 33 inches; 7,501 lbs. to 10,000 lbs. 35 inches 35 inches

Fenders (Line 26)

Honolulu County ordinance requires every motor vehicle upon a highway, except motorcycles and motor scooters, to be equipped with fenders for all wheels. The other Counties require fenders on all motor vehicles. 19-133.2-35 (b) (5), HAR, which has the force of a State law requires fenders on all motor vehicles.

Fail fenders if:

►They do not cover the width of the tire tread;

►They are missing or loosely attached; or

►They are damaged to the extent that sharp edges or protruding portions are hazardous to nearby persons who may accidentally brush against them.

Floor Pan (Line 28)

Fail if it is rusted through or damaged to the extent that:

►The occupants would not be adequately supported; or

►Debris and exhaust fumes can enter the interior of the vehicle.

Glazing Materials (Lines 17-19)

Fail if:

►The vehicle has no windshield. This is the only required glazing on a motor vehicle. If any of the other glazing material is missing and the absence leaves no dangerously sharp edges, the vehicle can be passed. However, no glazing material requisite for driving visibility can be replaced with an opaque substance.

►There are cracks, discolorations, chips, or scratches in windshields or front side windows that in your opinion significantly interfere with driving visibility. If an insignificant obstruction exists, the inspector and registered owner must both sign their agreement that the obstruction insignificantly affects safe driving visibility. Agreement shall be indicated on the right side of the Insurance Carrier line, such as "#18 OK" with owner's signature. The signature of the inspector in the Certification box indicates agreement with the notation. If registered owner is not present, the inspector's decision is final.

►Non-transparent (opaque) materials are used in place of glazing that is requisite for driving visibility.

►The window adjacent to the driver cannot be lowered to the down position. This assures that the driver will be able to use hand signals in the event that the electric signals fail. If the glass is totally missing, the vehicle can be passed.

►Glazing has less than 35% (plus or minus 6%) light transmittance, except that the windshield may not be tinted at all.

►Decal or sticker does not comply with County Ordinance. Honolulu's reads as follows:

Sec. 15-19.30 Windshields to be unobstructed *(a) No person shall drive any motor vehicle with any sign, poster or other nontransparent material upon the front windshield, side wings, or side or rear windows of such vehicle which obstructs the driver's clear view of the highway or any intersecting highway.*

(b) Except as otherwise provided in Section 15-15.5, posters or stickers approved by the chief of police shall be placed at the lower right-hand corner of the front windshield of a left-hand-driven motor vehicle or at the lower left-hand corner of the front windshield of a right-hand-driven motor vehicle, or in a location as approved by the chief of police. However, such posters or stickers so placed shall not cover an area greater than four inches by six inches, except for non-residence permits or for military requirements, in

which case an additional area four and one-half inches by six inches may be used.

(c) No person shall drive any motor vehicle with any nontransparent material or object suspended within the windshield area as viewed from the driver's seat, nor shall any person drive any motor vehicle upon the hood or radiator of which is attached any fixture ornament of any material which vibrates, swings or flutters within view of the driver of such vehicle.

Mirrors (Line 21)

County Ordinance requires only one mirror so located as to reflect to the driver a view of the highway for a distance of at least 200 feet to the rear. Motor vehicle manufacturers typically install three mirrors so traffic can be seen on each side of the vehicle as well as behind it. Having two outside mirrors allows good rear vision even when a vehicle is full of occupants or is loaded in another manner. If a car was manufactured with three mirrors but it has only one at the time of inspection, it can be passed due to the County ordinances, but encourage the owner to reinstall the missing mirrors. Vehicles built on a truck chassis must have an outside mirror on both sides. Inspect for location, field of view, condition, mounting, ease and stability of adjustment, and exposed sharp edges.

Fail mirrors if:

►Field of view is inadequate or a required mirror is missing.

►It is not securely mounted.

►It does not hold adjustment.

►It is damaged so as to have exposed sharp edges or poor reflectivity.

Occupant Protection (Line 25)

Vehicles must have occupant protection for every seat that is in a passenger compartment.

Fail if:

►The seat belt assemblies are not securely anchored, or the original anchorage position has been relocated, altered or modified.

►Any seat belt webbing is seriously deteriorated or frayed.

►A seat belt buckle does not function properly.

►A seat belt assembly is missing on vehicles that are required by law to have that assembly; or

►The seat belts are not an approved type or parts are missing from the seat belt assembly.

►All air bags are not operative.

Seats (Line 25)

Fail if:

►The seats are not securely fastened to the floor.

►A seat adjusting mechanism slips out of the set position.

Windshield Wipers And Washers (Line 20)

Fail if:

►Wipers or washers are inoperative; advise motorist if fluid is low.

►Wipers have less than 15 cycles per minute for low speed and less than 40 cycles per minute for high speed. (Vehicles manufactured on or after 1/1/68 were made with a high-speed rate of 45 cycles per minute and a low-speed rate of 20 cycles as well as a windshield washer system).

►Severely streak the windshield after five cycles.

►Do not completely clear water from wiped area.

►Blades are of improper size.

►Parts of wiper arms are missing or damaged to the extent that performance is impaired.

BRAKES (Line 8)

Antilock Brake System

Vehicles with an antilock break system (ABS) have a warning light for the ABS. It illuminates when the ignition is initially turned on, but after the computer goes through its checks, the light should go out. If the light stays on, there is a problem with the antilock brakes; however, the vehicle can still pass inspection. The ABS is an "add-on" to the service brakes; so if the ABS is inoperative, the vehicle can still be stopped normally. The only disadvantage is that the driver will be required to control the skidding in an emergency. A driver is generally not as effective as the ABS, which can make 10 adjustments per second on each wheel.

Dynamic brake test

Apply brakes fairly hard at four to eight miles per hour on a clean, smooth, level, dry, hard surface.

Fail if:

►The steering wheel moves abruptly to left or right of center.

►The brakes require a great deal of pedal force before they work.

Brake Failure Indicator Lamp

Required on new cars since 1/1/68. It indicates two things: (1) hydraulic brake system failure and (2) that parking brake is applied when ignition is on. To test the lamp, apply the emergency brake and then turn on the ignition.

Fail brakes **if**:

►Lamp does not illuminate, or it does not go off when brake is released. If the light stays on after the parking brake is released, check the fluid level in the master cylinder. If it is low, find out why it is low. There is probably a leak somewhere or the brake pads are worn very thin.

Hydraulic Brake System Leaks

Start the engine, apply the service brake and hold for ten seconds.

Fail breaks **if**:

► Excessive brake pedal travel is required before pedal resistance is felt.

►The brake pedal height decreases as you are maintaining application.

►The brake failure indicator light illuminates.

Parking brake (Line 9)

Apply on a level dry surface.

Fail parking brake **if**:

►It cannot hold the vehicle in place with transmission in low range and engine RPM increased to double idle RPM.

►The lever or pedal will not stay in the locked position or release when release control is operated.

Vacuum power booster

If the booster is not functioning, it will require much more effort to apply the brakes. To test the booster, release the parking brake, lightly apply the service brake and start the engine. The brake pedal will move downward slightly if booster is functioning properly. A steady hiss when brake is applied indicates a vacuum leak. If a problem is suspected, the booster should be inspected to make sure that its vacuum connection and hose are sound and that the connection grommet seals tightly around the vacuum connection.

Fail the vacuum power booster **if**:

►There is no downward movement of the brake pedal when engine starts.

►A leak is detected.

Visual Brake Inspections

Fail brakes **if**:

►There is visible indication of hydraulic fluid leakage around reservoir, cylinders, calipers, backing plates, tubing, hoses, master cylinder or connections, or the master cylinder fluid level is below the minimum mark.

►Required clips, or cotter pins are not properly installed or missing.

►Any brake system component is rubbing against the body, frame, suspension system or something that can cause the component to eventually fail.

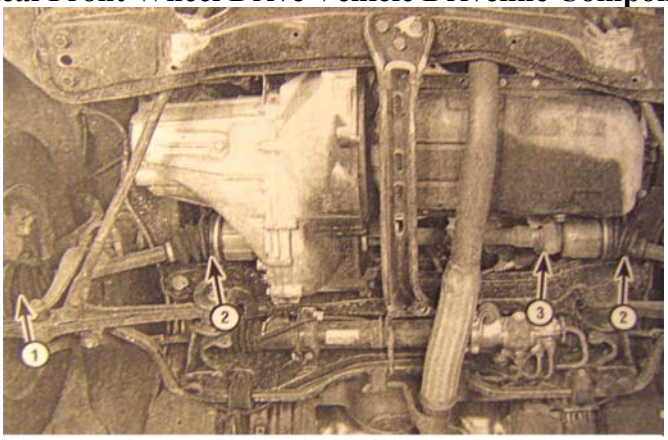
►Brake tubing or hose is damaged so as to significantly hinder the flow of fluid or leaking.

►Brake rotor discs have substantial cracks extending to the edge; disc is deeply scored or grooved, the friction surface is contaminated with oil, grease or brake fluid, or the disc is worn beyond minimum thickness stamped on the rotor. (A rotor thickness measurement is not required for the PMVI. A measurement would be made only if a brake repair was made in conjunction with an inspection.)

►Any brake pad thickness is less than 1/32 inch thick or damaged so as to compromise effectiveness. This applies only when the pads can be viewed or measured without taking anything apart.

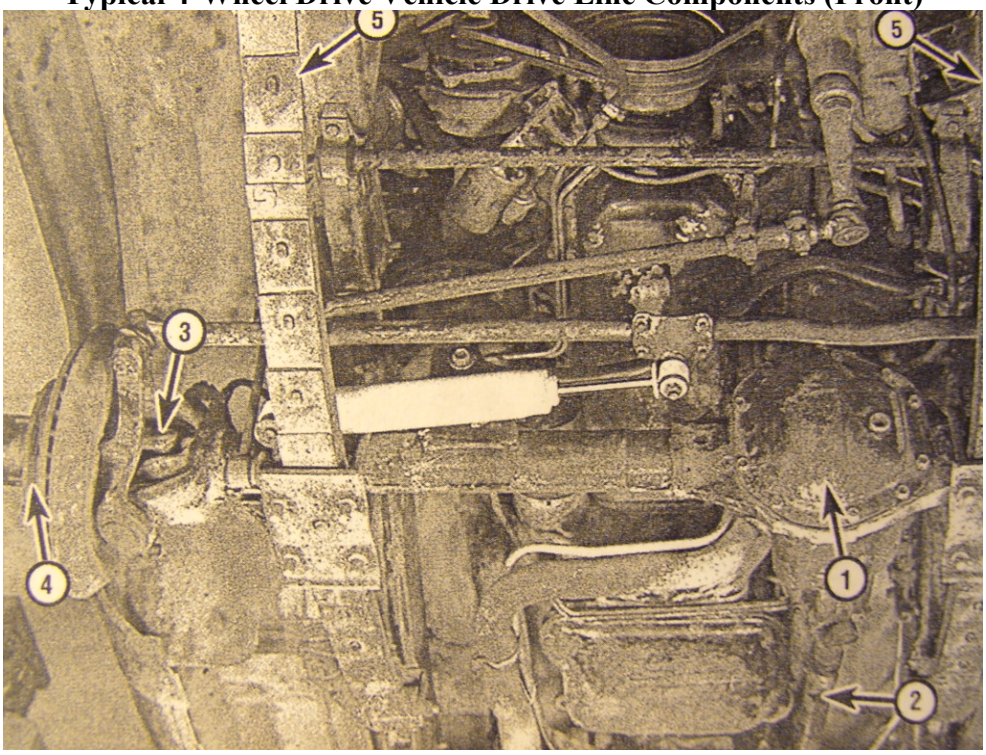
DRIVE LINE COMPONENTS (Line 34)

Typical Front Wheel Drive Vehicle Driveline Components



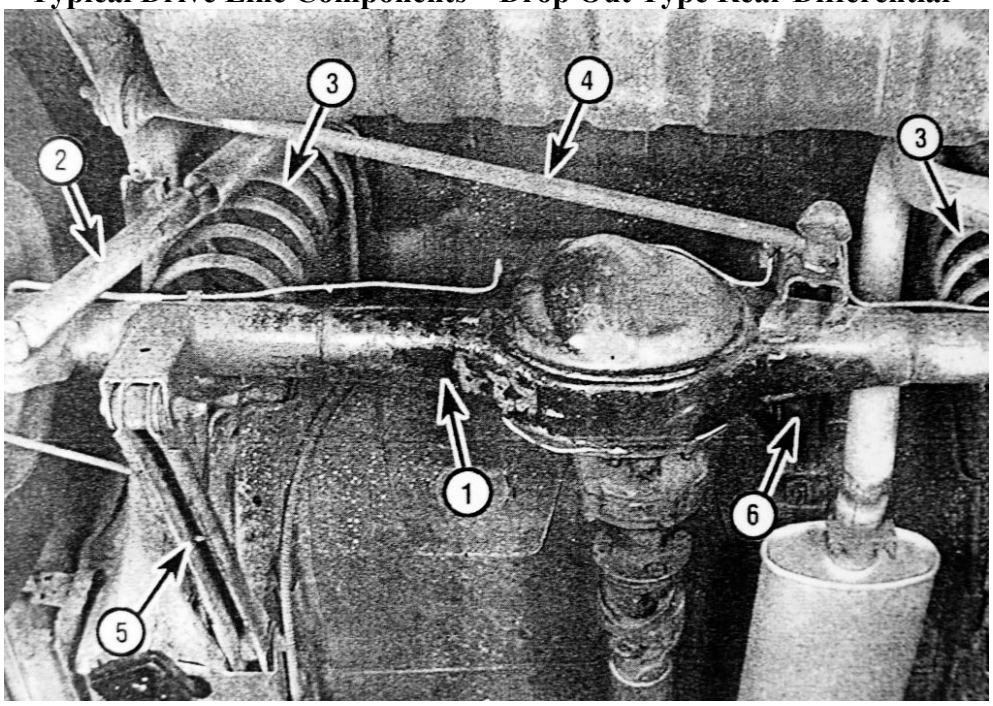
1. Outer CV Joint/Boot 2. Inner CV Joint/Boot 3. Intermediate Shaft Bearing

Typical 4-Wheel Drive Vehicle Drive Line Components (Front)



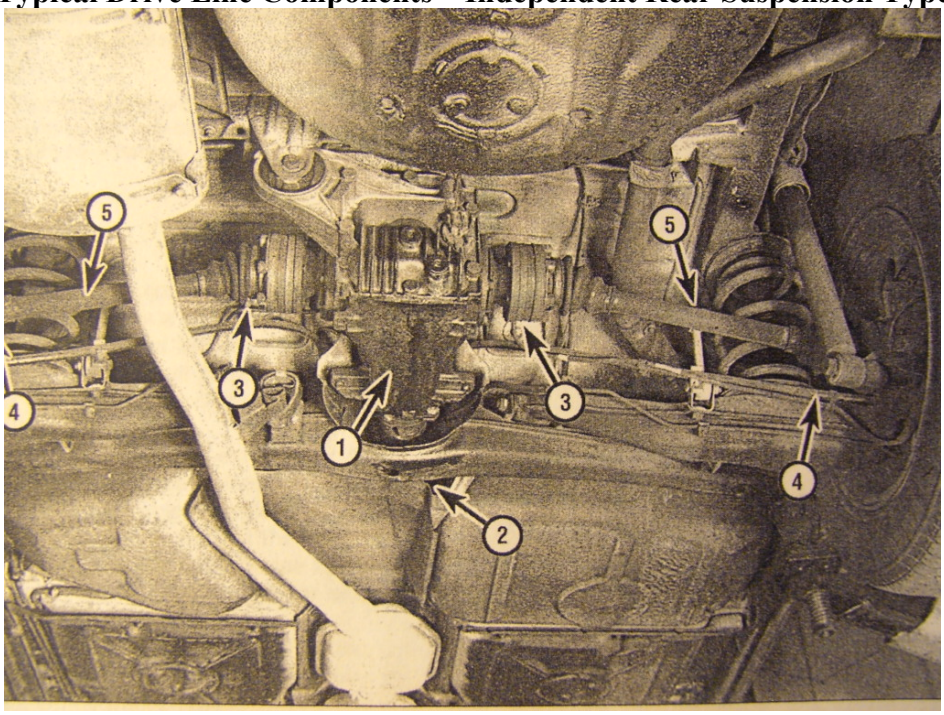
1. Front Differential 2. Drive Shaft 3. Front Drive Axle
4. Hub and Bearings 5. Front Leaf Springs

Typical Drive Line Components – Drop Out Type Rear Differential



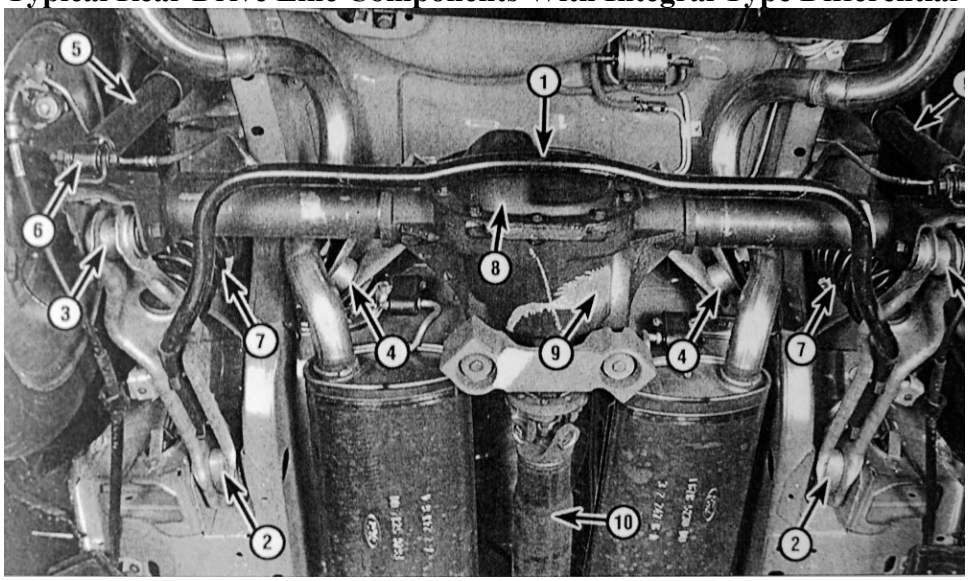
1. Rear Axle Housing 2. Shock Absorber 3. Coil Spring 4. Track Bar
5. Lower Suspension Arm 6. Upper Suspension Arm

Typical Drive Line Components – Independent Rear Suspension Type



1. Differential 2. Drive Shaft 3. Inner CV Joint /Boot
4. Outer CV Joint/Boot 5. Drive Axle

Typical Rear Drive Line Components With Integral Type Differential



1. Stabilizer Bar **2**. Lower Suspension Arm Pivot Bolt/Nut **3**. Lower Suspension Arm-to-Rear Axle Bolt/Nut **4**. Upper Suspension Arm Pivot Bolt/Nut **5**. Shock Absorber **6**. Shock Absorber-to-Rear Axle Bolt/Nut **7**. Coil spring **8**. Differential Cover **9**. Differential **10**. Rear Drive Shaft

Fail Vehicle **if**:

►Constant Velocity (CV) Boot is damaged to the extent that it is leaking or missing. **(Line 34)**

►Any component is severely damaged or insecurely mounted.

►Starter operates with gear selector in a forward or reverse gear (Automatic Transmission only).

Wheel bearing test (Line 34)

Raise the vehicle so the wheel is off the ground. Grasp tire at top and bottom and gently rock it back and forth. There should be no movement.

Fail if:

►There is more than 1/8-inch movement at outer circumference of the tire. To make sure any looseness is in the wheel bearing verses the ball joints, check for relative movement between the rotor and backing plate. Brake application eliminates bearing movement.

EXHAUST SYSTEM (Line 6)

Fail if:

►It is leaking.

►Any component part is not securely fastened.

►Any component part is missing, equipped with exhaust cut-outs, by-pass or similar devices.

►Emits a much louder noise than that emitted by the vehicle as equipped from the factory, or

►Exhaust gas is not exiting beyond the passenger compartment, unless the exit is in the location designed by the manufacturer.

Note: Emission controls include: Catalytic converter; Positive Crankcase Ventilation (PCV); Exhaust Gas Recirculation Valve (EGR); Evaporative Controls (1970). Since Hawaii is an EPA attainment area, emission inspections are not required here.

HORN (Line 16)

Fail if:

►A horn is inoperative, not audible from a distance of 200 feet

►The location of the horn switch interferes with other controls or the switch is not readily accessible to the operator.

INTAKE AND FUEL SYSTEM (Line 7)

Fail if:

►Any part of the system not securely and permanently fastened.

►There is fuel leakage at any point in the system.

►The fuel tank filler cap is missing or does not fit properly.

►There is evidence that the fuel tank was repaired without soldering.

Warn if:

►Hoses are worn or cracked to an extent that it appears that leakage is imminent.

LAMPS & REFLECTORS (Lines 10-15)

All lamps and reflectors shall conform to the location and color specified in Tables I – IV on Pages 11-14.

Extra information for inspectors:

Some lamps must illuminate to a degree that they are functional in both daylight and nighttime. Examples are turn signals, stop lamps and hazard warning flashers. Other lamps must be able to meet the nighttime sight distance criteria of local ordinances. Examples are taillights, side marker lights and headlights.

Backup Lamps: Vehicles manufactured on and after 1/1/69 were equipped with one or more backup lights. These must be white and illuminate only in reverse gear.

Hazard Warning Lamps: Vehicles manufactured after 1969 had these installed. Hazard lamps must flash simultaneously and function independent of the ignition. Hazard lamps will not flash when the service brake is applied.

Parking Lamps: All vehicles manufactured after 1/1/69 were manufactured with amber parking lamps. Earlier model vehicles had either white or amber.

Rear License Plate Light: Rear registration plates must have a white light, which will make the plate visible from 50 feet away from the plate.

Side Marker Lamps: Vehicles manufactured since 1/1/69 have side marker lamps and side marker reflectors. Side markers are illuminated whenever the headlamps or parking lamps are illuminated.

Stop Lamps: All vehicles manufactured since 1/1/69 were equipped with at least two red stop lamps. Each passenger car manufactured on or after 9/1/85, and each multipurpose passenger vehicle, truck, and bus, whose overall width is less than 80 inches, whose GVWR is 10,000 pounds or less, manufactured on or after 9/1/93, was equipped with a high-mounted stop lamp.

Tail Lamps: Most vehicles manufactured since 1950 have two red tail lamps. Earlier models have only one.

Turn Signals (inside and out): All steering column mounted turn signal switches are self-canceling. Most vehicles manufactured after 1950 had self-canceling turn signals.

Light and reflector items should be **failed** if**:**

►**Missing**

►**Damaged** so that light shows through the damaged portion of the lens (placing tape over the damaged portion of the lens is not adequate to pass the inspection but gluing that restores proper function is adequate) or moisture is present inside the lens, or reflector does not redirect light properly

►**Not properly installed**, or directs light improperly (this could be caused by vehicle body damage that causes a properly installed lamp or reflector to improperly direct light).

►Not of an approved **type** or **color** (See Tables I – IV on Pages 20-23 and Hawaii Administrative Rules 19-132),

►**Obscured** or blocked in any manner or is **covered** with material that is non-transparent and which diminishes the function of the lamp, lens or reflectors so as to put it out of conformance with FMVSS and local laws, ordinances or rules (the burden of proof of conformance is on the vehicle owner). If a lamp or reflector that is not required is installed, it cannot diminish the effectiveness of any required lamp or reflector.

►**Inoperable**, or operates improperly.

►The **reverse light** stays on in any gear position other than reverse.

►Headlamps do not have equal candlepower or cannot produce a light sufficient to reveal any person or object straight ahead for a distance of two hundred feet.

►Headlamps, auxiliary driving or fog lamps are not properly aimed.

►Turn signal or hazard warning lamp flashing rate is less than 60 per minute or more than 120.

►Turn signal self-canceling device does not operate.

►Side marker lamps do not illuminate when the headlamps or parking lights are turned on.

►Excessive pedal pressure is required to illuminate the stop lamps.

►The high beam indicator lamp, or any other safety oriented indicator lamp is inoperative.

►Headlight height is lower than 24 inches or higher than 54 inches. §291-25, HRS requires headlights to be no less than twenty-four inches or more than fifty-four inches above the road surface when measured to the headlamp center. However, Federal standards allow a minimum of 22 inches for headlights. Since a Federal law preempts a State law, a motor vehicle that was originally manufactured with headlights lower than 24 inches but not less than 22 inches, must not be failed on the basis of headlight height.

►Reflector height is lower than 24 inches or higher than 60 inches. Note: Sec. 15-19.3 of the Honolulu ordinances require reflectors to be mounted on the motor vehicle at a height not less than 24 inches nor more than 60 inches above the ground. However, Federal standards allow a minimum of 15 inches for the following: tail lamps, stop lamps, parking lamps, reflectors, backup lamp, turn signal lamps, side marker lamps, intermediate side marker lamps and intermediate side marker reflectors. If any of these items is less than the State or County requirement but within the Federal requirement the vehicle should not be failed, unless the vehicle was modified in a manner that reduced the height below a State or County requirement.

TABLE I—REQUIRED MOTOR VEHICLE LIGHTING EQUIPMENT OTHER THAN HEADLAMPS

Multipurpose Passenger Vehicles, Trucks, Trailers, and Buses, of 80 or More Inches Overall Width

Item	Multipurpose passenger vehicles, trucks, and buses	Trailers	Applicable SAE standard or recommended practice (See S5 for subreferenced SAE materials)
Taillamps	2 red	2 red	J585e, September 1977.
Stoplamps	2 red	2 red	SAE J1398, May 1985.
License plate lamp	1 white	1 white	J587 October 1981.
Reflex reflectors	4 red; 2 amber	4 red; 2 amber	J594f, January 1977.
Side marker lamps	2 red; 2 amber	2 red; 2 amber	J592e, July 1972.
Backup lamp	1 white	None	J593c, February 1968.
Turn signal lamps	2 red or amber; 2 amber	2 red or amber	SAE J1395, April 1985.
Turn signal operating unit	1	None	J589, April 1964.
Turn signal flasher	1	None	J590b, October 1965.
Vehicular hazard warning signal operating unit.	1	None	J910, January 1966.
Vehicular hazard warning signal flasher..	1	None	J945, February 1966.
Identification lamps	3 amber; 3 red	3 red	J592e, July 1972.
Clearance lamps	2 amber; 2 red	2 amber, 2 red	J592e, July 1972.
Intermediate side marker lamps.	2 amber	2 amber	J592e, July 1972.
Intermediate side reflex reflectors.	2 amber	2 amber	J594f, January 1977.
Conspicuity	See S5.7	See S5.7	See S5.7

TABLE II—LOCATION OF REQUIRED EQUIPMENT

Multipurpose Passenger Vehicles, Trucks, Trailers, and Buses, of 80 or More Inches Overall Width

Item	Location on—		Height above road surface measured from center of item on vehicle at curb weight
	Multipurpose passenger vehicles, trucks, and buses	Trailers	
Headlamps	On the front, each headlamp providing the upper beam, at the same height, 1 on each side of the vertical centerline, each headlamp providing the lower beam, at the same height, 1 on each side of the vertical centerline, as far apart as practicable. See also S7.	Not required	Not less than 22 inches (55.9 cm) nor more than 54 inches (137.2 cm).
Taillamps	On the rear, 1 on each side of the vertical centerline, at the same height, and as far apart as practicable.	On the rear, 1 on each side of the vertical centerline, at the same height, and as far apart as practicable.	Not less than 15 inches, nor more than 72 inches.
Stop lamps	....do	....do	Do.
License plate lamp	At rear license plate, to illuminate the plate from the top or sides.	At rear license plate, to illuminate the plate from the top or sides.	No requirement.
Backup lamp	On the rear	Not required	Do.
Turn signal lamps	At or near the front—1 amber on each side of the vertical centerline, at the same height, and as far apart as practicable. On the rear—1 red or amber on each side of the vertical centerline, at the same height, and as far apart as practicable.	On the rear—1 red or amber on each side of the vertical centerline, at the same height, and as far apart as practicable.	Not less than 15 inches, nor more than 83 inches.
Identification lamps	On the front and rear—3 lamps, amber in front, red in rear, as close as practicable to the top of the vehicle, at the same height, as close as practicable to the vertical centerline, with lamp centers spaced not less than 6 inches or more than 12 inches apart. Alternatively, the front lamps may be located as close as practicable to the top of the cab.	On the rear—3 lamps as close as practicable to the top of the vehicle at the same height, as close as practicable to the vertical centerline, with lamp centers spaced not less than 6 inches or more than 12 inches apart.	No requirement.
Clearance lamps	On the front and rear—2 amber lamps on front, 2 red lamps on rear, to indicate the overall width of the vehicle, one on each side of the vertical centerline, at the same height, and as near the top as practicable.	On the front and rear—2 amber lamps on front, 2 red lamps on rear, to indicate the overall width of the vehicle, one on each side of the vertical centerline, at the same height, and as near the top thereof as practicable[2, 3 4].	Do.
Intermediate side marker lamps.	On each side—1 amber lamp located at or near the midpoint between the front and rear side marker lamps.	On each side—1 amber lamp located at or near the midpoint between the front and rear side marker lamps.	Not less than 15 inches.
Intermediate side reflex reflectors.	On each side—1 amber located at or near the midpoint between the front and rear side reflex reflectors.	On each side—1 amber located at or near the midpoint between the front and rear side reflex reflectors.	Not less than 15 inches nor more than 60 inches.
Conspicuity	See S5.7	See S5.7	See S5.7
Reflex reflectors	On the rear—1 red on each side of the vertical centerline, as far apart as practicable, and at the same height. On each side—1 red as far to the rear as practicable, and 1 amber as far to the front as practicable.	On the rear—1 red on each side of the vertical centerline, as far apart as practicable, and at the same height. On each side—1 red as far to the rear as practicable, and 1 amber as far to the front as practicable.	Do.
Side marker lamps	....do	....do	Not less than 15 inches, and on the rear of trailers not more than 60 inches.

TABLE III—REQUIRED MOTOR VEHICLE LIGHTING EQUIPMENT

[All Passenger Cars and Motorcycles, and Multipurpose Passenger Vehicles, Trucks, Buses and Trailers of Less Than 80 (2032) Inches (mm) Overall Width]

Item	Passenger cars, multipurpose passenger vehicles, trucks, and buses	Trailers	Motorcycles	Applicable SAE standard or recommended practice (See S5 for subreferenced SAE materials)
Headlamps	See S7	None	See S7.9	J566 January 1960.
Taillamps	2 red	2 red	1 red	J585e, September 1977.
Stoplamps	2 red	2 red	1 red	SAE J586, February 1984.
High-mounted stoplamp.	1 red	Not required	Not required	J186a, September 1977.
License plate lamp.	1 white	1 white	1 white	J587, October 1981.
Parking lamps	2 amber or white	None	None	J222, December 1970.
Reflex reflectors	4 red; 2 amber	4 red; 2 amber	3 red; 2 amber	J594f, January 1977.
Intermediate side reflex reflectors.	2 amber	2 amber	None	J594f, January 1977.
Intermediate side marker lamps.	2 amber	2 amber	None	J592e, July 1972.
Side marker lamps.	2 red; 2 amber	2 red; 2 amber	None	J592e, July 1972.
Backup lamp	1 white	None	None	J593c, February 1968.
Turn signal lamps	2 red or amber; 2 amber	2 red or amber	2 amber; 2 red or amber.	SAE J588, November 1984.
Turn signal operating unit.[3,4,4]	1	None	1	J589, April 1964.
Turn signal flasher	1	None	1	J590b, October 1965.
Vehicular hazard warning signal operating unit.	1	None	None	J910, January 1966.
Vehicular hazard warning signal flasher.	1	None	None	J945, February 1966.

TABLE IV—LOCATION OF REQUIRED EQUIPMENT

[All Passenger Cars and Motorcycles, and Multipurpose Passenger Vehicles, Trucks, Trailers, and Buses of Less than 80 (2032) Inches (MM) Overall Width]

Item	Location on—		Height above road surface measured from center of item on vehicle at curb weight
	Passenger cars, multipurpose passenger vehicles, trucks, trailers, and buses	Motorcycles	
Headlamps	On the front, each headlamp providing the lower beam, at the same height, 1 on each side of the vertical centerline, each headlamp providing the upper beam, at the same height, 1 on each side of the vertical centerline, as far apart as practicable. See also S7.	See S7.9	Not less than 22 inches (55.9 cm) nor more than 54 inches (137.2 cm).
Taillamps	On the rear—1 on each side of the vertical centerline, at the same height, and as far apart as practicable.	On the rear—on the vertical centerline except that if two are used, they shall be symmetrically disposed about the vertical centerline.	Not less than 15 inches, nor more than 72 inches.
Stoplamps	On the rear—1 on each side of the vertical centerline, at the same height, and as far apart as practicable.	On the rear—on the vertical centerline except that if two are used, they shall be symmetrically disposed about the vertical centerline.	Not less than 15 inches, nor more than 72 inches.
High-mounted stoplamp.	On the rear, on the vertical centerline [See S5.1.1.27, S5.3.1.8, and Table III], effective September 1, 1985, for passenger cars only.	Not required	See S5.3.1.8 for passenger cars. Not less than 34 inches for multipurpose passenger vehicles, trucks, and buses.

TABLE IV—LOCATION OF REQUIRED EQUIPMENT—Continued

[All Passenger Cars and Motorcycles, and Multipurpose Passenger Vehicles, Trucks, Trailers, and Buses of Less than 80 (2032) Inches (MM) Overall Width]

Item	Location on—		Height above road surface measured from center of item on vehicle at curb weight
	Passenger cars, multipurpose passenger vehicles, trucks, trailers, and buses	Motorcycles	
License plate lamp	At rear license plate, to illuminate the plate from the top or sides.	At rear license plate	No requirement.
Parking lamps	On the front—1 on each side of the vertical centerline, at the same height, and as far apart as practicable.	Not required	Not less than 15 inches, nor more than 72 inches.
Reflex reflectors	On the rear—1 red on each side of the vertical centerline, at the same height, and as far apart as practicable. On each side—1 red as far to the rear as practicable, and 1 amber as far to the front as practicable.	On the rear—1 red on the vertical centerline except that, if two are used on the rear, they shall be symmetrically disposed about the vertical centerline. On each side—1 red as far to the rear as practicable, and 1 amber as far to the front as practicable.	Not less than 15 inches, nor more than 60 inches.
Backup lamp	On the rear	Not required	No requirement.
Turn signal lamps	At or near the front—1 amber on each side of the vertical centerline, at the same height, and as far apart as practicable. On the rear—1 red or amber on each side of the vertical centerline, at the same height, and as far apart as practicable.	At or near the front—1 amber on each side of the vertical centerline at the same height, and having a minimum horizontal separation distance (centerline of lamps) of 16 inches. Minimum edge to edge separation distance between lamp and headlamp is 4 inches. At or near the rear—1 red or amber on each side of the vertical centerline, at the same height and having a minimum horizontal separation distance (centerline to centerline of lamps) of 9 inches. Minimum edge to edge separation distance between lamp and tail or stop lamp is 4–inches, when a single stop and taillamp is installed on the vertical centerline and the turn signal lamps are red..	Not less than 15 inches, nor more than 83 inches.
Side marker lamps	On each side—1 red as far to the rear as practicable, and 1 amber as far to the front as practicable.	Not required	Not less than 15 inches.
Intermediate side marker lamps.	On each side—1 amber located at or near the midpoint between the front and rear side marker lamps.	Not required	Not less than 15 inches.
Intermediate side marker reflectors.	On each side—1 amber located at or near the midpoint between the front and rear side marker reflectors.	Not required	Not less than 15 inches, nor more than 60 inches.

>NOTE: (1) The term *overall width* refers to the nominal design dimension of the widest part of the vehicle, exclusive of signal lamps, marker lamps, outside rearview mirrors, flexible fender extensions, and mud flaps, determine with doors and windows closed, and the wheels in the straight-ahead position.

This supersedes the interpretation of the term "overall width" appearing in the FEDERAL REGISTER of March 1, 1967 (32 FR 3390).

(2) Paragraph S3.1 and Tables I and III of § 571.108 as amended (32 FR 18033, Dec. 16, 1967), specify that certain lamp assemblies shall conform to applicable SAE Standards. Each of these basically referenced standards subreferences both SAE Standard J575 (tests for motor vehicle lighting devices and components) which in turn references SAE Standard J573 on bulbs, and SAE Standard J567 on bulb sockets.

(3) Paragraph C of SAE Standard J575 states in part: "Where special bulbs are specified, they should be submitted with the devices and the same or similar bulbs used in the tests and operated at their rated mean spherical candlepower." The Administrator has determined that this provision of SAE Standard J575 permits the use of special bulbs, including tubular-type bulbs, which do not conform to the detailed requirements of Table I of SAE Standard J573. It follows that the sockets for special bulbs need not conform to the detailed requirements of SAE Standard J567. These provisions for special bulbs in no way except the lamp assemblies from meeting all performance requirements specified in Federal Standard No. 108, including those specified in the basically referenced SAE Standards, and in the subreferenced SAE Standard J575.

NEIGHBORHOOD ELECTRIC VEHICLES (NEV's) (Line 33)

In general, NEV's and other electric vehicles are inspected the same way as other vehicles. When an item is not applicable, the item on the inspection sheet is left blank. The following items are required on NEV's.

(1) A FMVSS Certification label with a 17 character VIN. FMVSS 500 requires NEVs to be manufactured so that they will not go faster than 25 mph.

(2) Four wheels in contact with the ground.
(3) Headlamps
(4) Tail lamps
(5) Turn signal lamps
(6) Stop lamps
(7) A red reflector on each side near the rear of the vehicle
(8) One red reflector on the rear of the vehicle
(9) A windshield
(10) A parking brake
(11) A Type 1 or Type 2 seat belt assembly for each seat.

The following items need special attention in addition to the requirements for fossil fuel vehicles when inspecting a NEV.

Intake & Fuel System (Line 7): Although an electric vehicle has no intake system, it does have a fuel system of batteries which must not leak or have excessive corrosion on the terminals. The batteries must be secure, the terminal connections tight and cell caps in place. Batteries must also be separated from occupants and be vented.

Headlamp High beams are not required for neighborhood electric vehicles.

Hazard warning lamps (Line 14): It is not a federal or state requirement for NEV's to have 4-way hazard warning lamps. Leave the pointed boxes blank to indicate that the item is not applicable.

Turn signals and tail lamps (Lines 12 & 13) are required.

Reflex reflectors (Line 15): NEV's are required to have a red reflector on each side near the rear of the vehicle and one red in the rear. Yellow reflectors on the front and forward sides are not required. Neither a front nor a rear side marker lamp is required.

Window Tint: Tint inspection will usually not be made on these vehicles, because they typically have only a windshield. Light transmittance of a strip of tint above the AS-1 or AS-5 mark near the top of the windshield need not be measured; however, tint cannot encroach the AS-1 or AS-5 portion. Should a later model NEV have windows in addition to the windshield, they must comply with tint requirements of 291-21.5, HRS.

Windshield (Line 18): A NEV may have either an AS-1 or AS-5 windshield.

Windshield wipers (Line 20): These are not required on NEVs but most manufacturers install them. Inspect them if they are installed, but only advise the owner if they fail.

Rear View Mirrors: NEVs are required to have an exterior mirror on the driver's side and either an interior rear view mirror in the middle or an exterior mirror on the passenger side.

Fail if:

►The NEV mirrors are not properly located.

Door Latches: NEVs have no doors.

Hood Latches (Line 24): NEVs usually do not have forward opening hood or trunk lids. Some models have latches on the front "hood", which covers the motor and two batteries. Some earlier models have screws that hold this cover in place. Neither of these is forward opening. The boxes of line 24 should be blank if the item is not applicable, or marked defective and corrected as appropriate.

Seat belts (Line 25): NEVs must have either Type 1 or Type 2 seat belts. A Type 1 seat belt assembly is a lap belt for pelvic restraint. A Type 2 seat belt is a combination of pelvic and upper torso restraints.

Bumpers (Line 27): NEVs are not required to have a bumper. If a NEV has a bumper, it must pass inspection.

Speedometer and Odometer (Line 30): NEVs are not required to have either a speedometer or odometer, but some manufactures install both as standard equipment. When they are present, the ignition usually must be turned on to read the speedometer. The meter alternates between showing the vehicle speed and the percent of battery charge. When the ignition is turned off, the odometer will be displayed briefly. If a NEV has an odometer, record the mileage on the inspection form; if there is no odometer, leave the mileage boxes on the form blank.

Triangular Slow Moving Vehicle Emblem and NEV Restriction Sign (Line 33): NEVs are required by 291C-130, HRS to have a slow moving vehicle emblem displayed at the rear. The emblem must be 14 inches high and 16 inches wide, mounted with the base down and at a height of not less than three nor more than five feet from the ground to base. NEVs must also have a permanently attached or painted sign that is visible to the driver stating that the vehicle must not be driven on roads with a speed limit greater than 35 mph and that the NEV may not travel faster than 25 mph.

Fail if:

►Either emblem or restriction sign is missing.

RECONSTRUCTED VEHICLES

Only the City & County of Honolulu has a reconstructed vehicle inspection program. A vehicle is considered a reconstructed vehicle subject to the reconstructed vehicle inspection law if any of the following conditions exist.

1. The original engine is relocated in the vehicle or is replaced with an engine that is not an original replacement equipment part (OREP) engine.
2. The carburetor, fuel injection system, air intake system, intake manifolds, or fuel tank of the original system is replaced with other than OREP components.
3. The original transmission is relocated in the vehicle or is replaced with a transmission that is not OREP equipment.
4. The original rims are reverse mounted or the rims or tires are replaced with other than OREP rims or tires that are more than plus or minus one inch rim diameter or more than plus or minus two inches rim width.
5. The original suspension system components (springs, torsion bars, shock absorbers, sway bars, etc.) are:
   (A) Replaced with other than OREP components; or
   (B) Adjusted, or equipped with added components, to change the height of the vehicle frame, as measured from the axle to frame.
6. The original vehicle body is:
   (A) Replaced with a body that is other than an OEM body;
   (B) Modified by replacing the hood, fenders, doors, or other body assemblies with other than OREP components;
   (C) Modified by the removal of significant portions of the hood, fenders, doors, or other body assemblies;

(D) Modified by changing the size of the windshield, or by changing the size of any window or window opening;
(E) Modified by changing the location of the driver's seating position within the vehicle which requires modification of the vehicle's floor pan; or
(F) Modified by additions to the hood, fenders, doors, or other body assemblies which significantly change the appearance or function of the body component.

7. The original vehicle frame, or any chassis structural assembly used as a frame is changed or modified in any manner.
8. An original axle, or assembly which functions as an axle is:
   (A) Replaced with other than an OREP axle;
   (B) Relocated to a different position with respect to the vehicle frame; or
   (C) Modified to a different configuration or dimension.
9. Any original steering system component is:
   (A) Replaced with other than an OREP component; or
   (B) Modified or relocated in any manner.
10. The original head lamps, tail lamps, marker lamps, signal lamps, or exterior reflectors are:
    (A) Replaced with other than OREP components; or
    (B) Relocated in a manner that significantly changes the appearance of the vehicle.
11. Any original service brake system or parking brake system component is:
    (A) Replaced with other than OREP components;
    (B) Modified in any manner except for the installation of OEM or OREP manufactured for that vehicle; or
    (C) Relocated in any manner.

Reconstructed Vehicle Permit Required (Line 31)

Fail if:

►If vehicle lacks required recon permit and sticker.

REGISRATION (Line 22)

Registration Certificate

►Vehicle description & VIN must match the vehicle

►License plate numbers & decal on vehicle must match the registration certificate.

Hawaii Insurance Identification Card (Line 32)

►Name on card must match registration certificate & insurance must be in effect at the time of inspection

VIN must be in agreement with:

►Registration and vehicle

►Insurance Card VIN for Vehicle

Plates

►Vehicles must have two plates

►Plates must be secure and legible

►Plates must be least 12 inches above the ground.

If the vehicle passed the registration inspection but failed one of the other criteria, do not sign the form or affix a sticker. Put your inspector number is in the right-hand

boxes (the boxes on the left are used when a different inspector passes a vehicle that failed earlier) and give the blue copy of the form to the driver so he or she will know what items need to be corrected in order for the vehicle to pass inspection. (Since some boxes include more than one criterion, some explanation may be necessary to ensure that the owner understands the defects that exist). When he or she returns, check the items that failed the first inspection. If they pass, indicate that the failed items are corrected. If another inspector failed the vehicle and you are now passing it, put your inspector number in the boxes on the left side of the form, sign the form in the signature box and affix the stickers. If you failed the vehicle and your number is in the boxes on the right side of the form, do not fill in the Inspector Number boxes on the left side of the form. Leave them blank until the vehicle passes.

If the vehicle failed the registration inspection, sign the blue copy outside of the signature box, put your inspector number in the "Inspector Number" boxes located on the right-hand side of the form and give it to the driver. Having your signature outside of the box helps the motor vehicle registration clerks check the validity of the form. When the defect is corrected, indicate it in the pointed box at the top section of the form, and sign in the box. If a different inspector at the station completes the inspection, that inspector signs in the box and places his or her inspector's number in the left-hand boxes.

SPEEDOMETER-ODOMETER (Line 30)

Record the odometer reading on the form. If it is in kilometers, make a note of this on the form. The registration office will convert it when entering the information in the City computer.

Fail if:

►Speedometer does not operate.

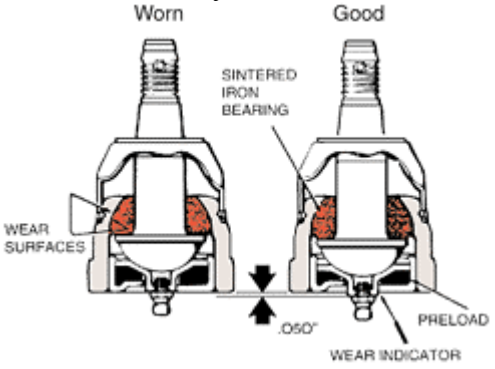
►The speed does not read in miles per hour.

►A comparison of the current mileage and what is on the old form indicates that the odometer is not working. (If the old form is not available, just record the current mileage).

STEERING SYSTEMS (Line 1)

Ball Joints

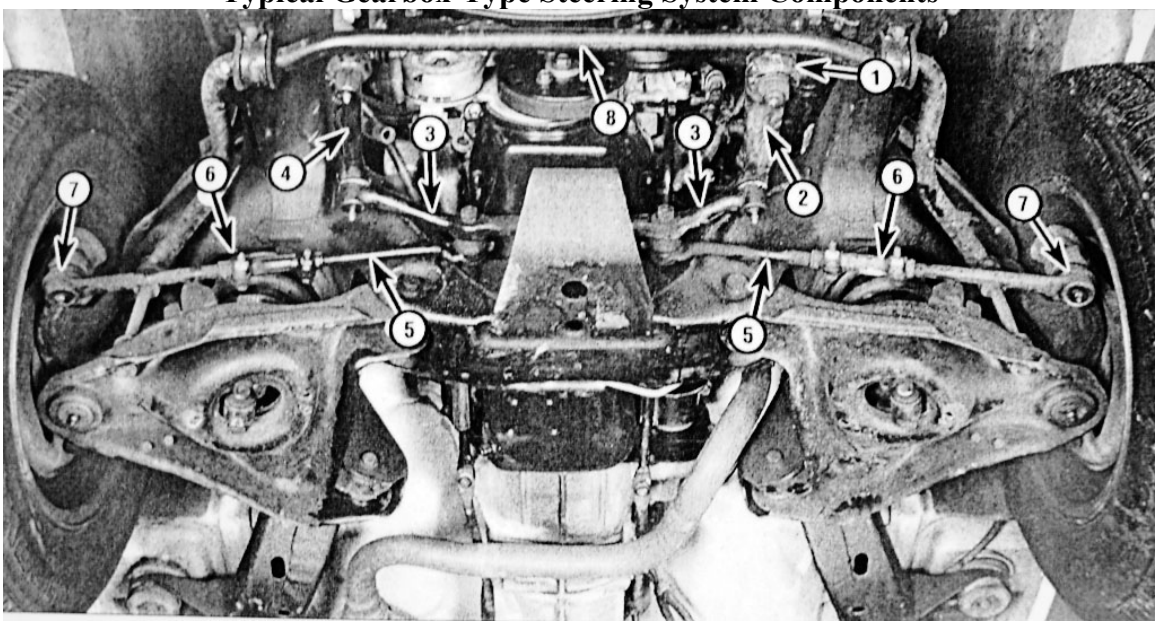
Warn motorist if: ►A ball joint boot is damaged and leaking or worn out (see bottom of graphic on right). Some joints have no wear indicator. If you have doubts about



the ball joints, recommend to the motorist that a suspension or alignment specialist check the system.

Two typical steering systems are pictured below.

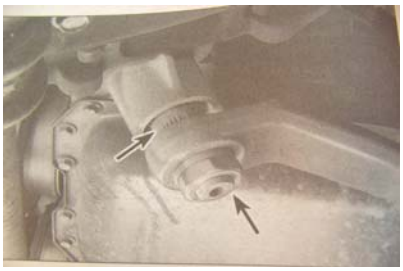
Typical Gearbox-Type Steering System Components



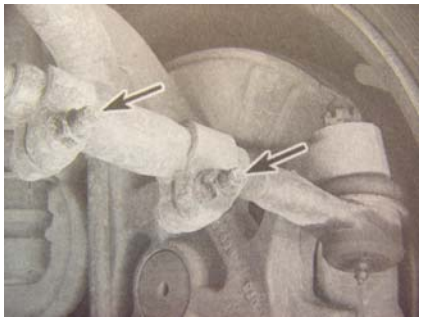
1. Steering gearbox 2. Pitman arm 3. Center link 4. Idler arm 5. Inner tie-rods
6. Tie-rod adjusters 7. Outer tie-rods 8. Stabilizer bar

Fail steering **if**:

►The steering gear (#1 above) is leaking or the bolt is loose.

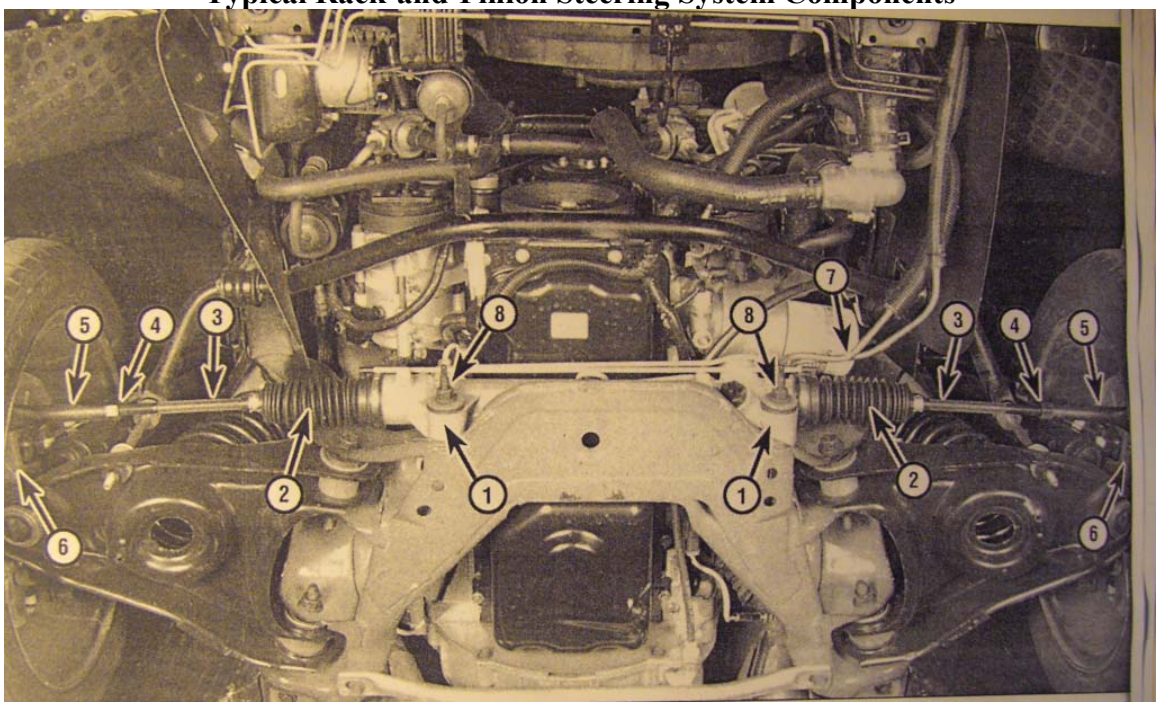


►The tie rod clamp nuts (at each end of #6) are loose.



►The steering linkage fasteners are loose or bushing is deteriorated.

Typical Rack-and-Pinion Steering System Components



1. Rack-and pinion 2. Rack-and pinion boots 3. Inner tie-rods 4. Tie-rod jam nut 5. Tie-rod ends 6. Steering knuckle 7. Power steering haudraulic lines 8. Rack-and-pinion mounting bolts

►Fail the rack and pinion boots (#2 in Rack-and-Pinion picture above) if they are leaking badly.

Steering Wheel Play

With Engine Running

Fail if:

►Steering wheel maximum play (lash) exceeds: 2 inches for power steering; 3 inches for manual.

►Steering wheel does not turn freely full left and right.

►Wheel and column can be moved as a unit.

Under the hood

Fail if:

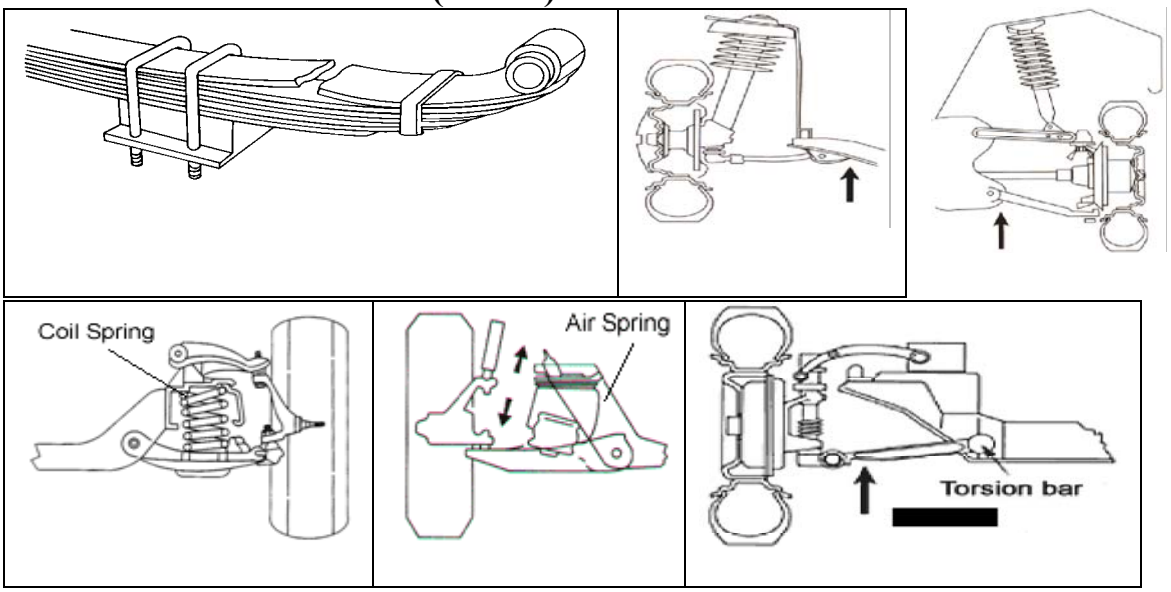
►A hose is leaking or the reservoir is below the minimum level.

►Power steering belt is badly worn or has improper tension (>1/2 inch movement with thumb pressure between two pulleys).

►The pump mounting is loose.

►Steering linkages or tie rod ends appear to be excessively worn, loose or damaged.

SUSPENSION SYSTEMS (Line 3)



A vehicle should look level when it is on a level surface. Push down on a corner and see if it stops rocking after two oscillations.

Fail if:

►The shock absorbers do not stop it in two oscillations.

►The vehicle cannot be pushed down.

With vehicle raised, visually check for broken leaf springs, coil springs, air springs (***Caution***: If air suspension vehicles are hoisted via the body support area, make sure that the air suspension switch is "off" to avoid damaging the air spring), torsion bar or shock absorber damage. Also check that shackles, bushings, spring clips and U-bolts are securely mounted and undamaged.

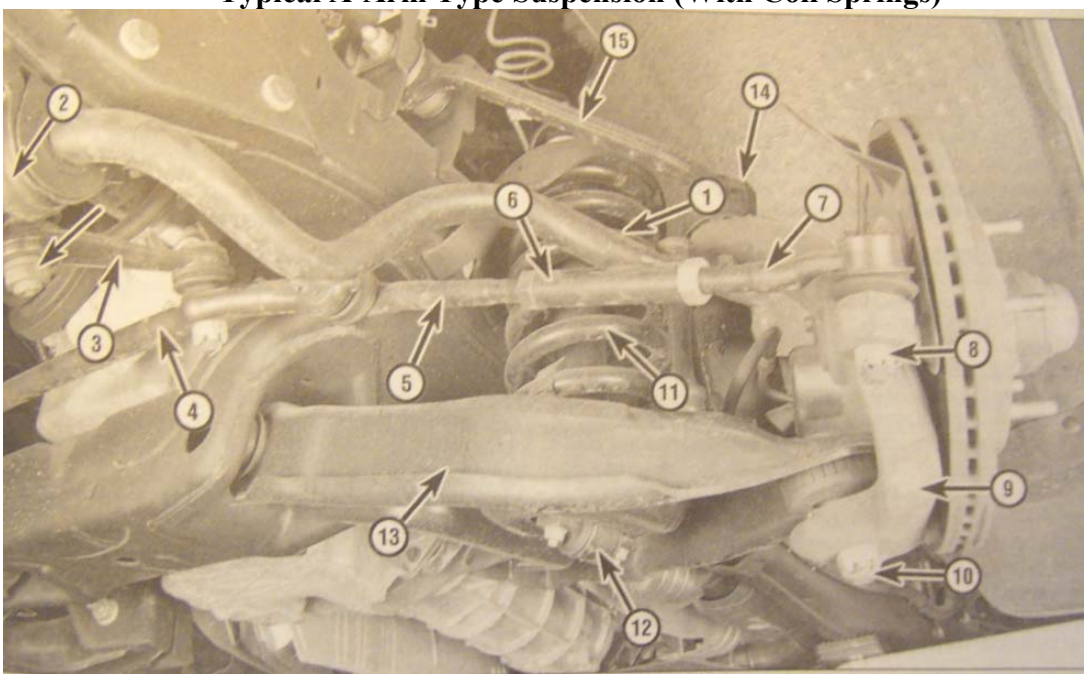
►Coil springs must not be extended by spacers or blocks, be shortened, or insecurely mounted.

►Shock absorbers must be installed and must not have severe fluid leaks (slight dampness is ok) or loose or broken mountings.

►There should be no indications that any tire or other moving part rubs a stationary portion of the vehicle.

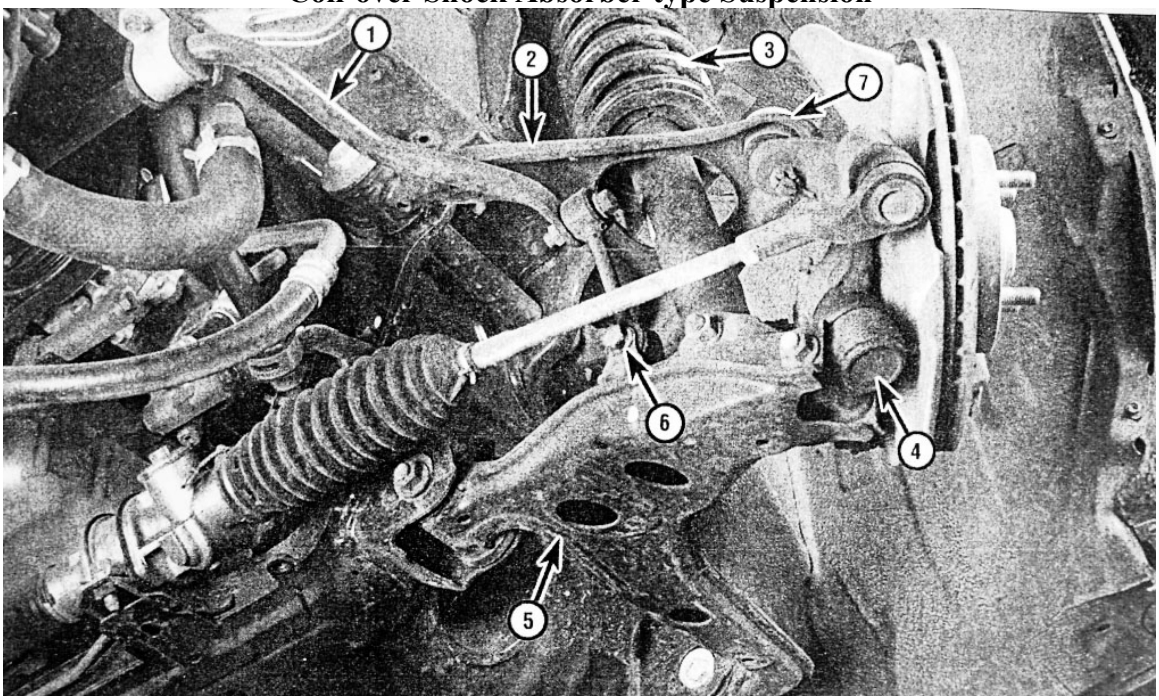
TYPICAL FRONT SUSPENSION SYSTEMS

Typical A-Arm Type Suspension (With Coil Springs)



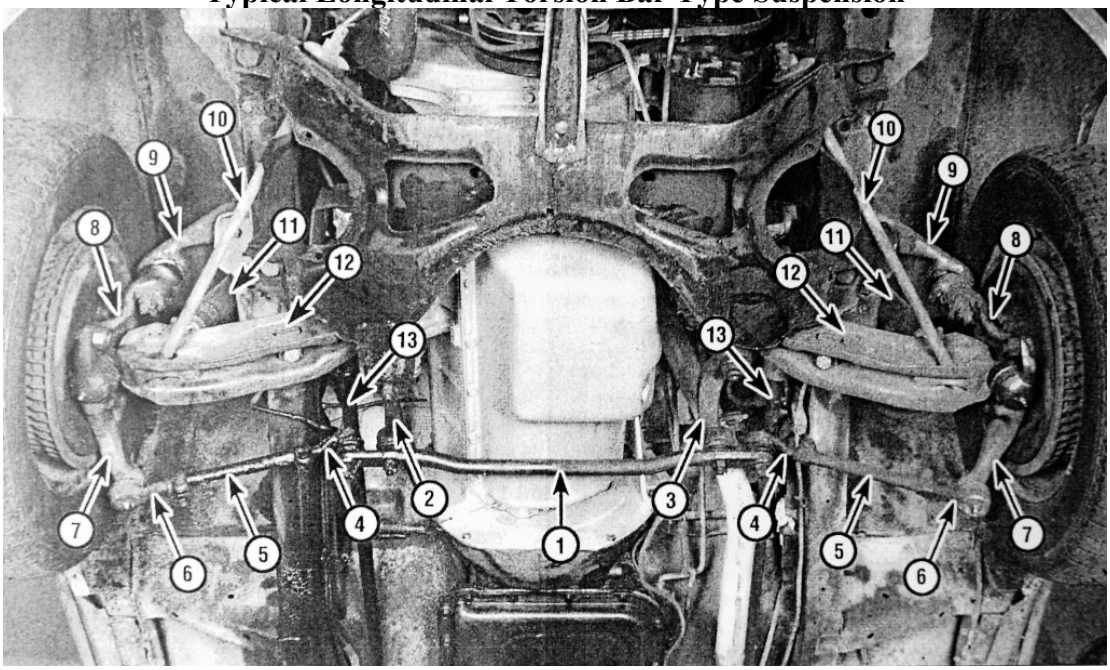
1. Stabilizer Bar **2**. Stabilizer Bar Bushing and Mounting Clamp **3**. Pitman Arm **4**. Center Link
5. Inner Tie-rod end **6**. Tir-rod Adjuster Tube **7**. Outer Tie-rod End **8**. Tie-rod Ballstud/Nut
11. Coil Spring **12**. Shock Absorber **13**. Lower control Arm **14**. Upper Control Arm Ball Joint

Coil-over Shock Absorber type Suspension



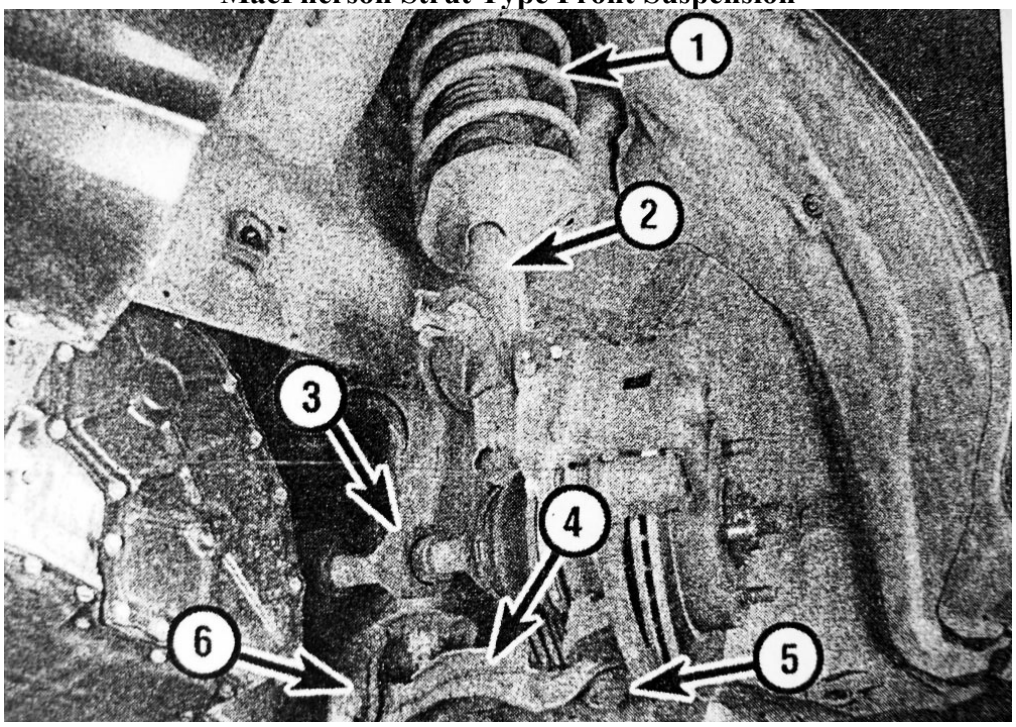
1. Stabilizer Bar **2**. Upper Control Arm **3**. Shock Absorber/Coil Spring **4**. Lower Ball Joint
5. Lower Control Arm **6**. Stabilizer Link **7**. Upper Ball Joint

Typical Longitudinal Torsion Bar Type Suspension



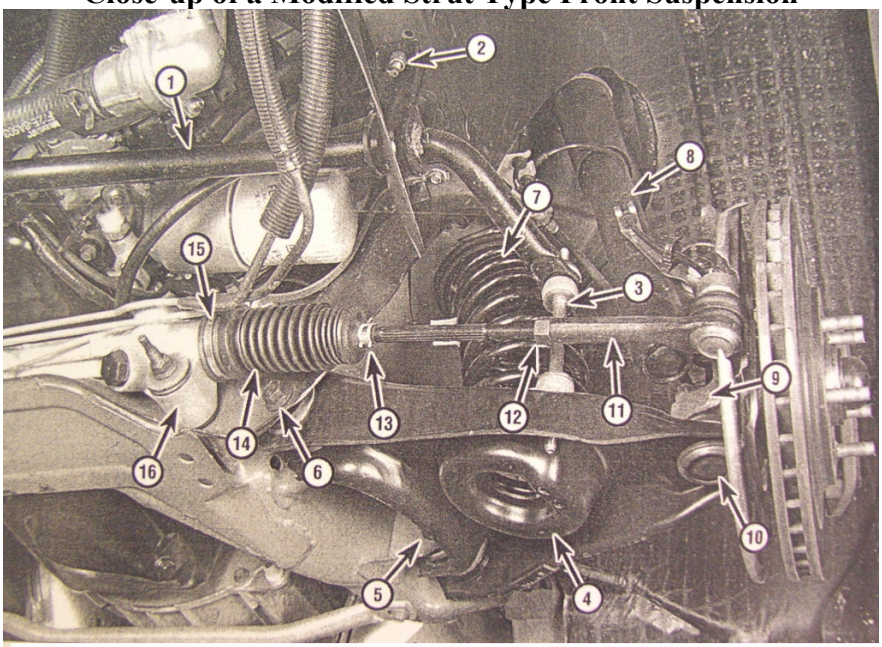
1. Center Link **2**. Idler Arm **3**. Pitman Arm **4**. Inner Tie-Rod (Tie-Rod End) **5**. Tie-Rod Adjuster Sleeve **6**. Outer Tie-Rod (Tie-Rod End) **7**. Steering Arm **8**. Steering Knuckle **9**. Upper Control Arm **10**. Strut Rod **11**. Shock Absorber **12**. Lower control Arm **13**. Torsion Bar

MacPherson Strut Type Front Suspension



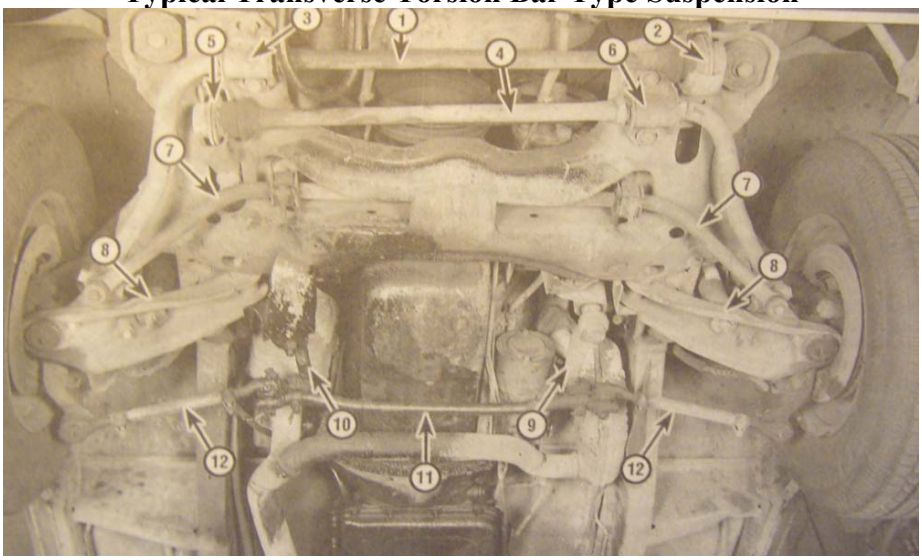
1. Coil Spring **2**. Strut Assembly **3**. CV Joint Axle **4**. Lower control Arm **5**. Ball Joint **6**. Control Arm Pivot Bolt/Nut

Close-up of a Modified Strut Type Front Suspension



1. Stabilizer Bar **2**. Stabilizer Bar Clamp **3**. Stablizer Bar-to-Lower Control Arm Link **4**. Lower Control Arm **5**. Control Arm Pivot Bolt/Nut **6**. Control Arm Pivot **7**. Coil Spring **8**. Strut Assembly **9**. Steering Knuckle **10**. Ball Joint **11**. Tie-Rod End **12**. Tie-Rod End Jam Nut **13**. Steering Gear Dust Boot Outer Clamp **14**.Steering Gear Dust Boot **15**. Steering Gear Dust Boot Inner Clamp **16**. Steering Gear

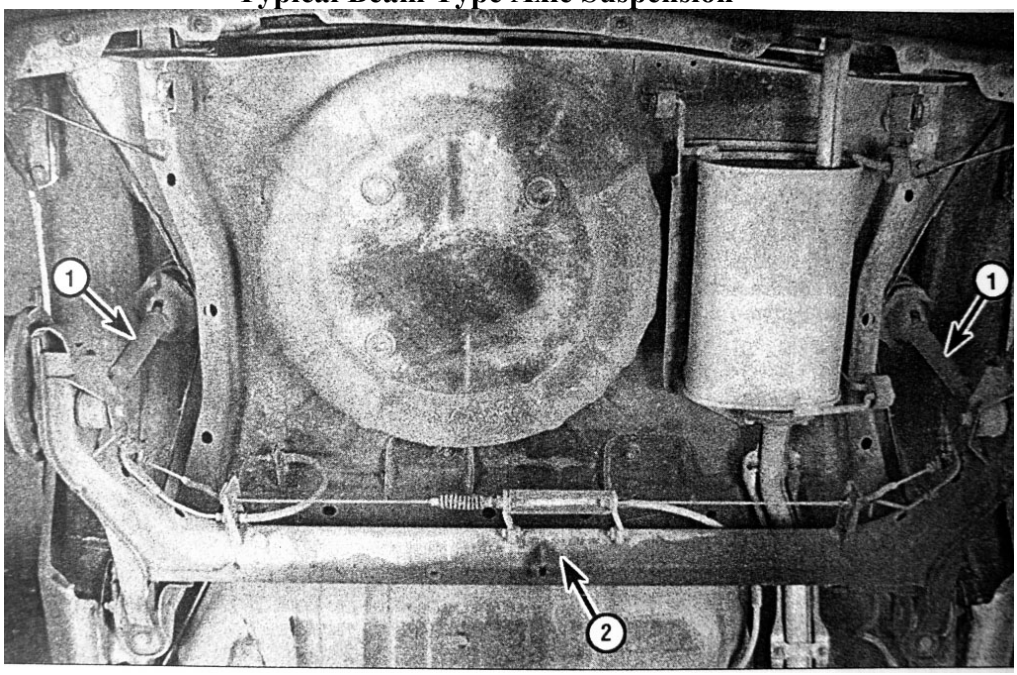
Typical Transverse Torsion Bar Type Suspension



1. Right Torsion Bar **2**. Right Torsion Bar Anchor **3**. Right Torsion Bar Pivot Cushion Bushing **4**. Left Torsion Bar **5**. Left Torsion Bar Anchor **6**. Left Torsion Bar Pivot Cushing Bushing **7**. Stabilizer Bar **8**. Lower Control Arm **9**. Pitman Arm **10** Idler Arm **11**. Center Link **12** Tie-Rod

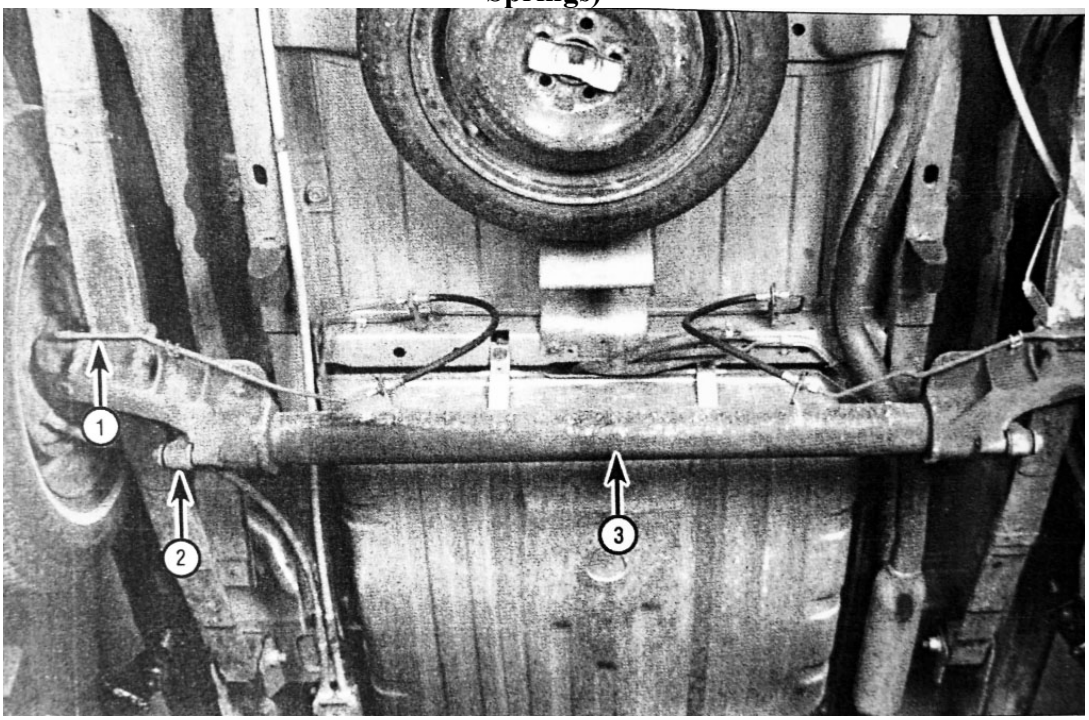
Here are some pictures of typical rear suspension systems.

Typical Beam Type Axle Suspension



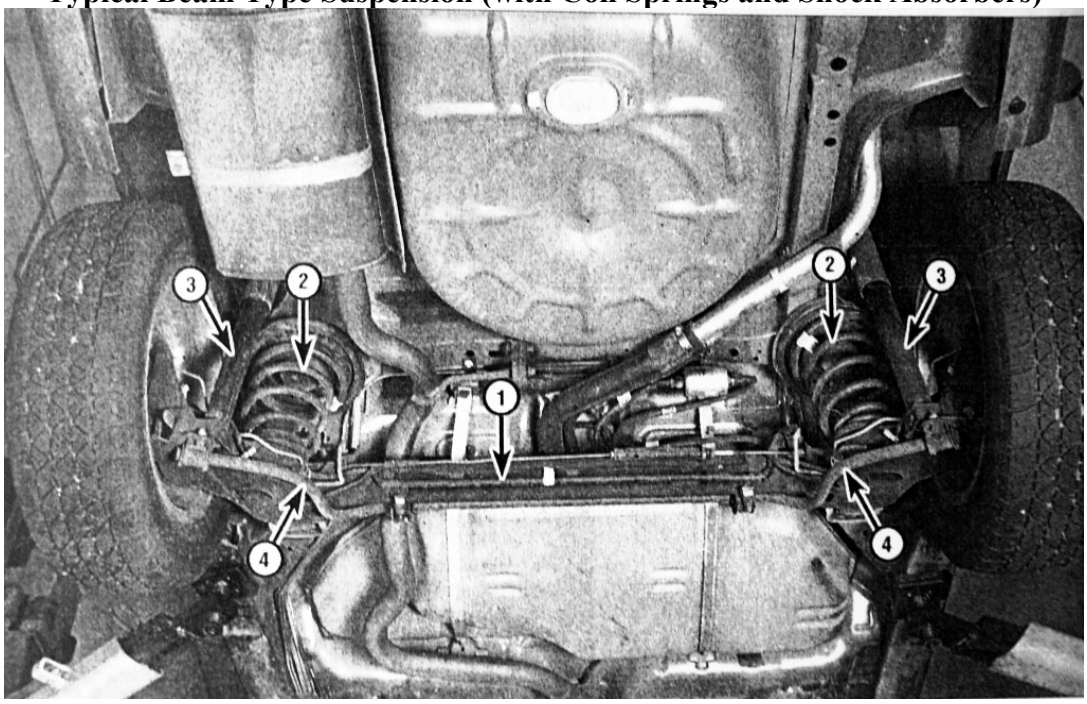
1. Shock Absorber and Coil Spring Assembly **2**. Axle Beam

Typical Beam Type Suspension (with Leaf Springs)



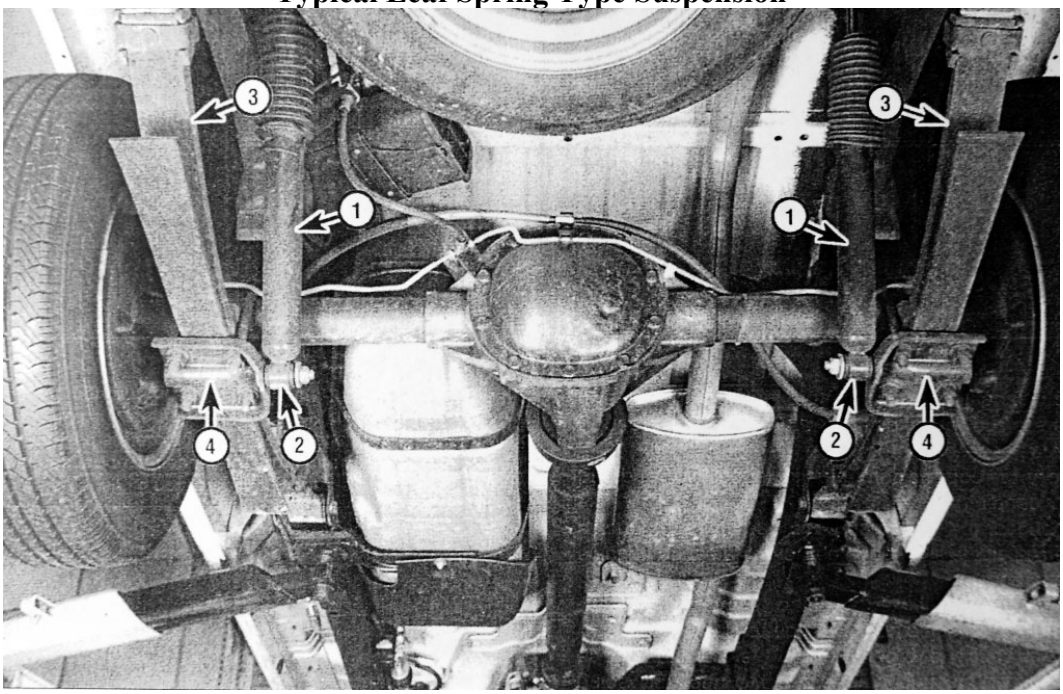
1. Leaf Spring **2**. Shock Absorber **3**. Axle

Typical Beam Type Suspension (with Coil Springs and Shock Absorbers)



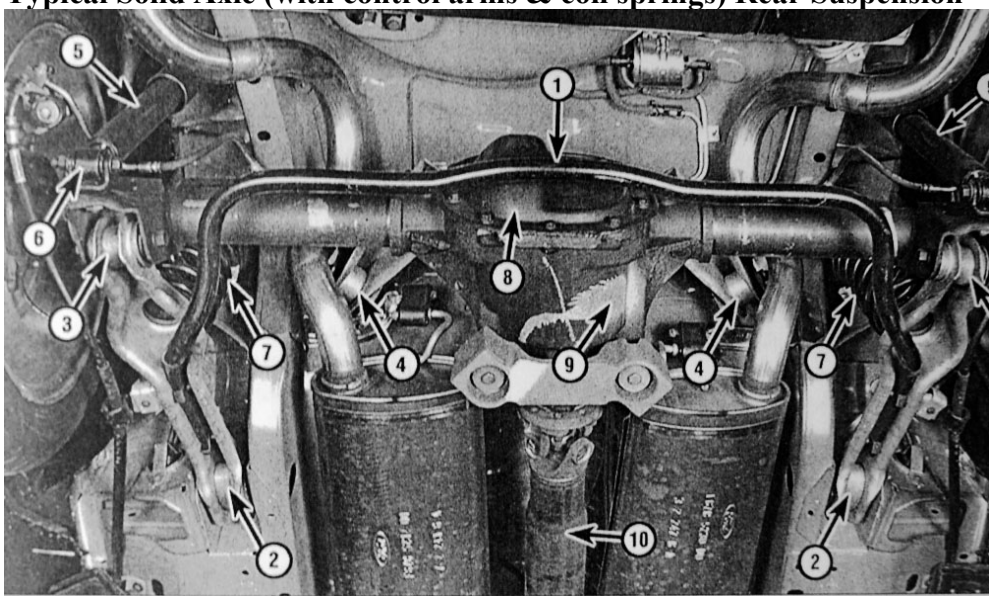
1. Rear Axle Assembly 2. Coil Spring 3. Shock Absorber 4. Stabilizer Bar

Typical Leaf Spring Type Suspension



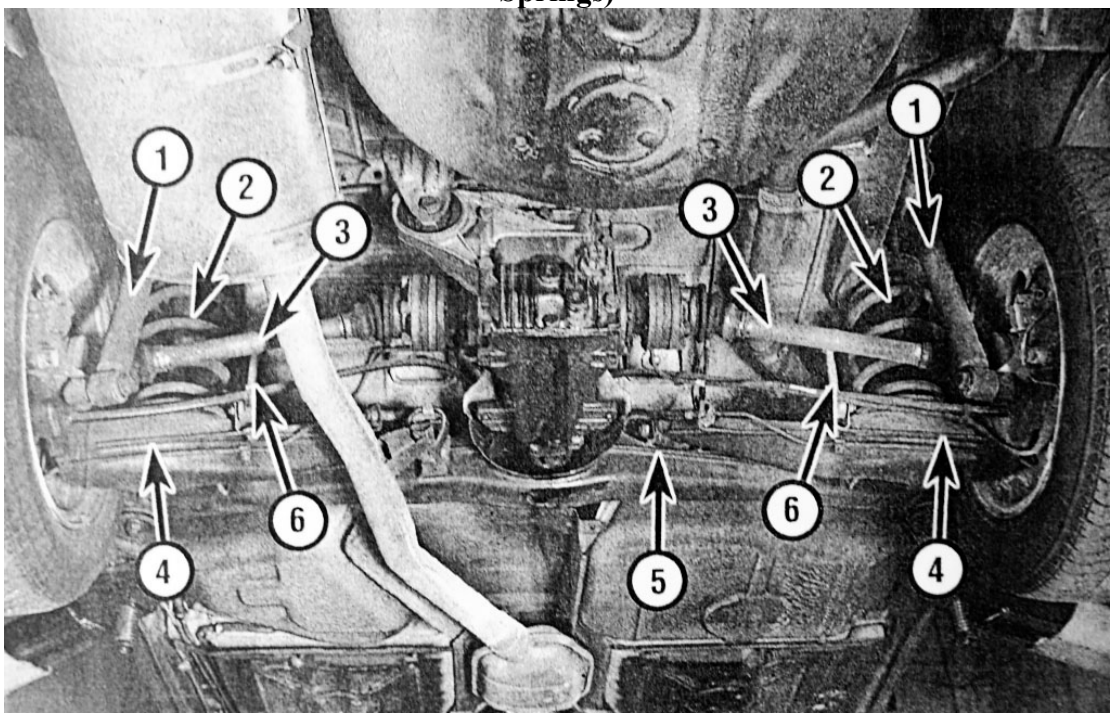
1. Shock Absorbers **2**. Lower Shock Absorber Mount **3**. Multi-leaf Spring Assemblies
4. Leaf Spring Anchor Plates

Typical Solid Axle (with control arms & coil springs) Rear Suspension



1. Stabilizer Bar 2. Lower Suspension Arm Pivot Bolt/Nut **3**. Lower Suspension Arm-to-Rear Axle Bolt/Nut 4. Upper Suspension Arm Pivot Bolt/Nut 5. Shock Absorber 6. Shock Absorber-to-Rear Axle Bolt/Nut 7. Coil Spring

Typical Trailing Arm Type Rear Suspension (with Shock Absorbers and Coil Springs)

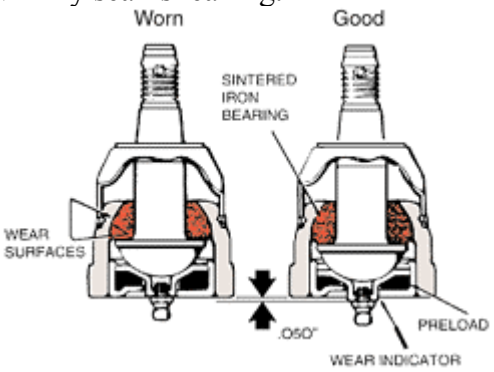


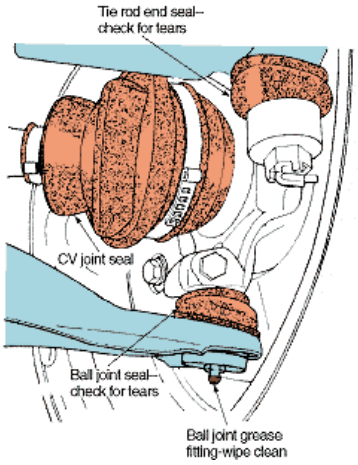
1. Shock Absorber 2. Coil Spring 3. Drive Axle 4. Trailing Arm 5. Rear Axle Carrier 6. Stabilizer Bar Link

Ball joints: In some vehicles the ball joint needs to be replaced when the grease fitting can be wiggled. Some ball joints have a wear indicator – a little shoulder that sticks out 5/100 inch at the bottom (see graphic below). The wear indicators must be checked with vehicle weight on the wheels. Some ball joints have neither a wear indicator nor a grease fitting. To keep the inspection simple, just check the seals for damage and leaks. If you have doubts about the status of a ball joint, advise the motorist to have the vehicle inspected by a wheel alignment or suspension specialist.

Warn motorist if:

►Any seal is leaking.



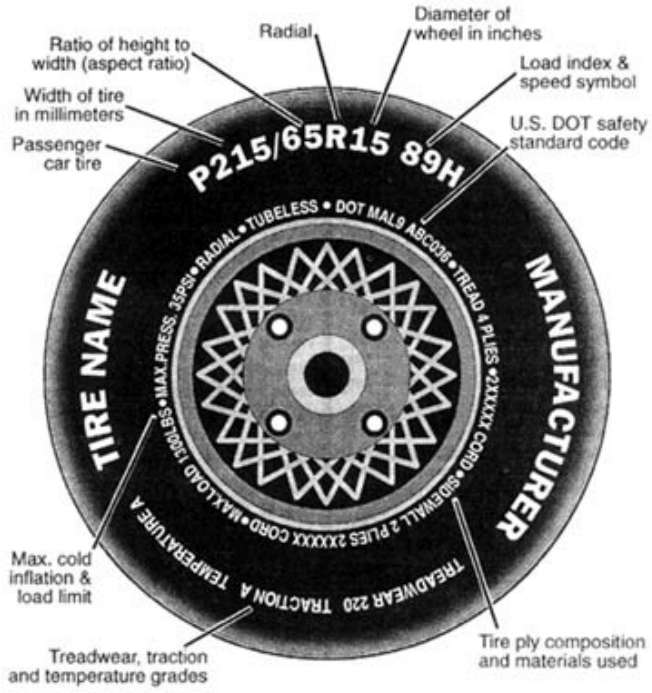


The most common vehicle symptoms associated with worn ball joints are: wandering, uneven or cupped tire wear, and erratic steering.

TIRES (Line 4)

Tires are often neglected by motorists. Air pressure and general condition should be checked at least once a month. Advise owner if the tire pressure does not match the motor vehicle manufacturer's recommendations. The load index number (see graphic) must be the same or higher than that recommended by the vehicle manufacturer.

The higher the aspect ratio, the taller the sidewall. Low profile tires have an aspect ratio of 50 or less.



Fail tires if:

►Less than 2/32 inch treads remains when measured in any two adjacent major grooves or the tread wear indicators in any two adjacent major grooves contact the road in any three locations spaced equally around the outside of the tire. Motorcycles and mopeds have a 1/32-inch limit.

►There are bumps, bulges, cuts, snags, knots indicating partial failure or structure separation, cracks in excess of one inch in any direction and deep enough to expose the cords, or tire is regrooved, unless tire is marked “Regroovable” on the sidewall.

►There are tires of different sizes or types (bias/radial) mix mounted on the same axle.

►A tire on an axle has a load capacity that is less than one half of the GAWR shown on the vehicle certification label, is on a rim of improper width, or can rub or touch other parts of the vehicle when operated.

►A tire does not display the "DOT" symbol on the sidewall, is marked "For Farm Use Only", "Off-Highway Use only", "For Racing Use only", or other inappropriate restrictive use.

►A tire is not marked with the standard automotive size designation, does not have highway-type design treads, or the tire tread is equipped with metal studs.

WHEELS (Line 5)

Wheels that are out-of-round or warped can cause vibrations. Advise the motorist, if run-out is observed. Spin the wheel and look for a wobble. Lateral run-out can be observed by facing the tire treads and spinning the wheel. Lateral run-out is wheel movement parallel to the spin axis.

Radial run-out can be seen by facing the sidewall of a tire and spinning the wheel. It is the up or down movement of the wheel bead seat in a plane perpendicular to the spin axis.

Fail the vehicle if:

►Wheel lateral or radial run-out exceeds 1/8 inch at rim circumference.

►Wheel bolts, nuts, studs, or lugs are loose, missing, severely worn, rusted, or damaged.

►A wheel is bent, cracked, repaired by welding or brazing, damaged, mismatched or has elongated or oversize mounting holes.